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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,738	01/11/2002	Slade H. Gardner	TA-00496	1561

7590 04/07/2003

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EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/044,738	GARDNER, SLADE H.	
	Examiner Christopher A. Fiorilla	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 29 January 2003.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 26-35 is/are allowed.
- 6) Claim(s) 1-12 and 14-25 is/are rejected.
- 7) Claim(s) 13 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.<br> | 6) <input type="checkbox"/> Other: _____ .                                   |

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1. Claims 14-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 is indefinite in that the preamble of the claim refers to “items” (plural), while the body of the claim recites “item” (singular). The claim should be amended such that the number is consistent throughout the claim.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,3-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. (6,124,028) in view of Nilsson et al. (6,357,144) for the reasons as set forth in the previous office action.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. (6,124,028) in view of Nilsson et al. (6,357,144) as applied to claims 1,3-5 and 7-12 above, and further in view of Behrendt et al. (5,865,922).

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5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagle et al. (6,124,028) in view of Nilsson et al. (6,357,144) as applied to claims 1,3-5 and 7-12 above, and further in view of **Environment Conscious Ceramics (Ecoceramics)** by Singh.

6. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 26-35 are allowed.

8. Applicant's arguments filed January 29, 2003 have been fully considered but they are not persuasive.

With respect to the rejection of the claims under 35 USC 103 applicant argues:

**The examiner states in the Official Action that Nagle et al. '028 includes the steps of: "forming a perform from wood; drying the perform; pyrolyzing the perform; reshaping the perform by machining; and infusing the perform with silicon to form the silicon carbide item." Applicants, however, respectfully submit that the Examiner's statement is not an accurate characterization of Applicants' rejected claims. Clearly the language used by the examiner is not the language used in Applicants claims. For example, claims 1,3-5 and 7-12 never use the language "drying the perform" or "reshaping the perform by machining" as suggested by the examiner.**

This argument is not persuasive. As, stated above the examiners statement is the office action is a statement of what is taught by Nagle et al.. The examiner did not state that these are the exact claimed limitations. Applicant states that the claims never use the language "drying the perform". Although the specific phrase "drying the perform" is not believed to be present in the claims, claim 13, line 3 refers to a "drying temperature" and thus it is clear that drying takes

place. Applicant further states that the claims never use the language “reshaping the perform by machining”. Again, although the specific phrase “reshaping the perform by machining” is not believed to be present in the claims, claim 4 recites “machining the perform to net-shaped dimensions”.

**Additionally the examiner’s statements suggest that these claims simply require “pyrolyzing the perform” but this is not accurate either. Instead these claims feature the step of “heating the perform to a second temperature in a furnace at atmospheric pressure to pyrolyze the preform, the second temperature being higher than the first temperature.” This specific language as used by the Applicants was not referenced in the Examiner’s basis for rejection. In other words, Applicants respectfully submit that the Examiner’s statements mischaracterized the language found in the rejected claims.**

This argument is not persuasive. First, it is clear that the claims do indeed require pyrolyzing the perform as admitted in the above paragraph. Thus, the examiner has not mischaracterized the claims. Admittedly, claim 1 further recites that the pyrolyzation is carried out by “heating the perform to a second temperature in a furnace at atmospheric pressure” wherein “the second temperature being higher than the first temperature”. The primary reference, Nagle et al., discloses that this heating can be carried out at temperatures up to 2000°C (col. 18, line 40), which would clearly be higher than the first heating step temperature taught by Nagle et al. (i.e. the drying step) because if one attempted to dry wood at such a temperature the wood would decompose. Further, note that Nagle et al. discloses at col. 18, line 19, that the heating may be carried out at atmospheric pressure. Thus, it is clear that the cited reference teaches the abovementioned claim limitations.

**The examiner admits that Nagle et al. ‘028 fails to teach or suggest that “drying takes place in an autoclave.” Applicant, however, respectfully submits that the language of claim 1 requires “heating the perform under pressure to a first temperature in an autoclave” and does not specifically “drying takes place in an autoclave” as suggested by the examiner. Clearly, this mischaracterizes the language from the rejected claims as well. This is impermissible.**

This argument is not persuasive. Again, the examiner's statement is directed to the disclosure of Nagle et al. not to the claim language. Thus, there is no mischaracterization of the claim language. Further, note that the claims include open claim language and thus, it encompasses a process wherein drying takes place. Thus, it is not understood how applicant can allege that the claim language is mischaracterized.

**Applicants respectfully submit that the Examiner has failed to state where in Nagle et al. applicant's featured elements of the rejected claims can be found (either for the examiner stated rejection or for the proper language found in the elements of the claims), and applicant respectfully submits that this was not done because these cited patents fail to include applicant's featured elements of the claims.**

This argument is not persuasive. The examiner has directed applicant to the relevant portions of Nagle et al. in the paragraphs above.

**Although Nagle et al. discloses in its background how attempts to make silicon carbide items have used processes related to wood, the focus of the Nagle et al. patent is the charcoal formation and not silicon carbide items. As such, the techniques for forming the silicon carbide items as claimed by Applicants are going to be quite different and are quite different from those disclosed in Nagle et al.**

This argument is not persuasive. The above statements are a mischaracterization of the Nagle et al. reference. Columns 41 and 41 of Nagle et al., for example, teach the conversion of carbon to silicon carbide. See particularly equation (1) in column 40. Thus, Nagle et al. is indeed concerned with the formation of silicon carbide items.

**Nilsson et al. discloses a two stage process for drying of raw wood for the manufacturing of wood based boards such as particle boards or oriented strand boards. The purpose of Nilsson et al. clearly is not to use wood to form silicon carbide items as set forth in the claim invention. As such, Nilsson et al. is going to and does have different process steps for achieving its purpose than the claimed invention. Accordingly, the deficiencies of Nagle et al. are not going to be found in Nilsson et al.**

This argument is not persuasive. Nilsson was not cited to teach the production of silicon carbide. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1.

**One skilled in the art would have no motivation to combine the teachings of a patent document related to charcoal (Nagle et al) with a patent document related to forming particle boards (Nilsson et al.) to somehow arrive at an invention for making silicon carbide items. With all respect, the leap is just too great. Clearly, improper hindsight is being used by using Applicant's claimed invention as a roadmap and then trying to improperly piecemeal sections of Nagle et al. with Nilsson et al. to somehow arrive at the claimed invention.**

This argument is not persuasive. Again, applicant attempts to mischaracterize the Nagle et al. reference by stating that it is related to charcoal and not to silicon carbide items. Again, applicant's attention is directed to columns 41 and 41 of Nagle et al., for example, which teach the conversion of carbon to silicon carbide. See particularly equation (1) in column 40. Thus, Nagle et al. is indeed concerned with the formation of silicon carbide items.

**Nilsson et al. fails to teach using an autoclave to heat a perform under pressure to a first temperature in an autoclave and heating the perform to a second higher temperature at atmospheric pressure in a furnace to pyrolyze the perform.**

This argument is not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

**Applicants also respectfully disagree with the examiner's comments related to temperatures being obvious in view of experimentation. This simply is not true, especially when the processes of the cited art are so different and when the selected temperatures achieve specific results to accomplish a desired result in the item which is not taught in the art. When this occurs, for a proper *prima facie* 35 USC 103 rejection, the examiner has the burden of providing evidence that the prior art achieves the same result as desired by the claimed invention.**

This argument is not persuasive. The argument is based on the premise that the art of record does not teach the "item" (i.e. the silicon carbide product). As, indicated above, this is a mischaracterization of the Nagle reference. Again, applicant's attention is directed to columns 41 and 41 of Nagle et al., for example, which teach the conversion of carbon to silicon carbide. See particularly equation (1) in column 40. Thus, Nagle et al. is indeed concerned with the formation of silicon carbide items. Changes in temperature, concentrations or other process conditions of an old process within the broad teaching of the prior art does not impart patentability in the absence of an unexpected result. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Christopher A. Fiorilla  
Primary Examiner  
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